WHAT IS CLAIMED IS:

1. Lubricant grease for low and high temperature application, comprising a mixed grease and polyolefin oil,

wherein said mixed grease comprises fluorine-containing lubricant grease containing perfluoropolyether oil as a base oil thereof and fluorocarbon resin powder as a thickening agent thereof and urea-containing lubricant grease containing polyester oil as a base oil thereof and a urea compound as a thickening agent thereof,

wherein 3 to 30 parts by weight of said polyolefin oil is added to 100 parts by weight of said mixed grease.

2. Lubricant grease according to claim 1, wherein said polyolefin oil has a pour point of not more than -50°C and a kinematic viscosity of 10 to 70 mm^2/s at 40 °C.

3. Lubricant grease according to claim 1, wherein said urea-containing lubricant grease has a evaporation amount not more than 25 wt%, when said urea-containing lubricant grease is kept at 200 °C for 250 hours.

4. Lubricant grease according to claim 3, wherein said polyester oil is an aromatic ester compound of monovalent alcohol having 7 to 22 carbon atoms and aromatic tricarboxylic or tetracarboxylic acid or derivatives thereof and/or an aliphatic ester compound of monovalent carboxylic acid having 7 to 22 carbon atoms and trimetylolpropane, pentaerythritol or

dipentapentaerythritol.

5. Lubricant grease according to claim 4, wherein said polyester oil is an aromatic ester compound of monovalent alcohol having 7 to 22 carbon atoms and aromatic tricarboxylic or tetracarboxylic acid or derivatives thereof.

6. Lubricant grease according to claim 3, wherein a urea compound serving as a base oil of said urea-containing lubricant grease is shown by a chemical formula below:

$$R_1—NHCONH—R_3—NHCONH—R_2$$

where R_3 is an aromatic group; R_1 and R_2 are selected one among an aliphatic group, an alicyclic group, and an aromatic group respectively; R_1 and R_2 are to be the same or different from each other.

7. Lubricant grease according to claim 3, wherein for 100 wt% of an entire amount of said urea-containing lubricant grease, 70 to 95 wt% of said ester oil and 30 to 5 wt% of said urea compound are mixed with each other.

8. Lubricant grease according to claim 1, wherein for 100 wt% of an entire amount of said fluorine-containing lubricant grease, 70 to 90 wt% of said perfluoropolyether oil and 10 to 30 wt% of said fluorocarbon resin powder are mixed with each other.

9. Lubricant grease according to claim 8, wherein said fluorocarbon resin powder is polytetrafluoroethylene resin powder.

10. Lubricant grease according to claim 1, wherein said

mixed grease contains 25 to 70 wt% of said fluorine-containing lubricant grease and 30 to 75 wt% of said urea-containing lubricant grease.

11. Lubricant grease according to claim 1, wherein said mixed grease is applied for electric auxiliaries for a car.

12. A rolling bearing comprising an inner ring; an outer ring concentric with said inner ring; a plurality of rolling elements disposed between said inner ring and said outer ring; and lubricant grease sealed on a periphery of said rolling elements,

wherein said lubricant grease is the grease for low and high temperature application according to claim 1.

13. A rolling bearing according to claim 12, wherein said rolling bearing is applied for electric auxiliaries of a car.